

ABSTRACT

A method for controlling electric conduction on nanoscale wires is disclosed. The nanoscale wires are provided with controllable regions axially and/or radially distributed. Controlling those regions by means of microscale wires or additional nanoscale wires allows or prevents electric conduction on the controlled nanoscale wires. The controllable regions are of two different types. For example, a first type of controllable region can exhibit a different doping from a second type of controllable region. The method allows one or more of a set of nanoscale wires, packed at sublithographic pitch, to be independently selected.